

INTRODUCTION OF TROUT AND THE PLANTING OF
EYED EGGS IN REMOTE AND ISOLATED WATERS OF
GLACIER NATIONAL PARK

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GLACIER NATIONAL PARK

WEST GLACIER, MONTANA

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by

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Asst. Superintendent.
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The introduction of trout fry of different species to Glacier Park was begun in the early history of the Park; commencing shortly after the Park's creation, or about 1914. The waters then planted were the most accessible and the quantity of fish was of course, small. This was due to the bad roads and the small amount of fry obtainable at that time. The success attained from these initial plants; the rapid and prolific growth of the different species was remarkable. In fact the early visitors to Glacier Park were amazed at the quantity and size of the trout from these waters.

In 1921, my first year in Glacier, I made an extended trip, visiting most of the lakes and streams in the Park. At that time there were many lakes and streams barren of fish. I was deeply impressed with the possibilities of these virgin waters, if they could be stocked with trout. I was confronted with the problem of getting the fry into these almost inaccessible places. Some of these could be reached with pack horses, but in many cases, this method was useless as there were no trails within many miles of them. It would be a comparatively easy task to stock the lakes to which pack horses could be taken; but to plant the wilderness waters, the usual methods were not feasible.

I brought this problem to the attention of Mr. W. T. Thompson, Supt. of the U. S. Fisheries Station at Bozeman, Montana. Mr. Thompson suggested the introduction of eyed eggs to waters inaccessible by pack horses. In July, 1922, Mr. Thompson and our Rangers made the initial plant of black spotted (red throat) eggs, planting about one million. The method used was as follows: Eyed eggs were received at Glacier Park from the Yellowstone hatchery, transferred to small cases suitable for horse packing, and taken by auto truck to various disbursing centers. From here they were taken by pack horses to the ends of trails nearest the waters for which they were intended. Here they were transferred to still smaller packs and carried in on the backs of the men. This was not always an easy problem. Many difficulties were encountered by our workers. Icing the cases to retard the development of the eggs was a prime essential. Carrying this ice was a problem but this was overcome by carrying extra pack loads of ice. Dense alder thickets and jungle had to be penetrated. The man packs, weighing from forty to sixty pounds soon became a burden to the toiling men. Now and again a quarrelsome grizzly questioned our right-of-way through his huckleberry patch. These were only a few of the difficulties encountered. But in every instance the

2057

the zeal of our force prevailed and the eggs were planted.

In planting the eggs we tried to select gravelly beaches or bars. We tried to simulate as nearly as possible the natural spawning habits of the fish. Skooping out a small amount of gravel in from one to three feet of water, we placed about five hundred eggs in this depression. These eggs were then covered with coarse gravel to a depth varying from one to three inches. In flowing streams we used a "V" shaped board to retard the flow of water while we were depositing and covering the eggs. In some instances, where gravel was lacking or unsuited to our purpose we planted the eggs without covering them, selecting shaded places in rocky clefts along the lake shores.

We were all keenly interested in learning what the results would be from this method of planting. We checked carefully on the barren lakes each year. In 1923 we were still unable to determine if our plants were successful. But in 1924 observations determined that the eyed-egg planting was a success. In that year schools of fish estimated to be about eight inches long were seen by the Rangers.

This method of planting remote and inaccessible waters has enabled us, in Glacier Park, to plant eight or more streams and about twelve lakes that otherwise would still be barren waters. These are now well stocked with fish awaiting the skill of the zealous angler.

Since the inauguration of this method of fish planting we have developed our system until now, with improved man packs and egg cases, we can reach any body of water, no matter how distant or difficult the way.

In all, about two million black spotted eggs have been planted during the last four years. I believe that other species could be handled in a similar manner. But it was our intention to concentrate on the black spotted for our remote waters, planting this kind only.

We all feel that the success of this venture is due to Mr. W. T. Thompson, who sponsored the idea. Without his valuable assistance and cooperation we could not have attained the results of which we are all justly proud.

FRY PLANTING.

Undoubtedly, all of you are familiar with the method of planting fry. ~~And yet, I feel that it will interest you if I touch briefly on~~ fry planting in Glacier Park. A hatchery is maintained and operated during the summer months, hatching most of the fry planted in the Park. We also received many shipments through the State of Montana and the Federal hatchery at Bozeman, Montana.

Let me illustrate our method of handling large quantities of fry. Just recently a U. S. Fisheries car arrived at Glacier Park with two hundred cans or about one hundred thousand large brook fingerlings. This

is about five hundred fish to a can. Ten trucks were waiting at the Station and the cans were transferred to them. These trucks carried the cans of fish to the waiting pack strings many miles away. Four pack strings, of ten horses each, were used. The area covered in this plant alone, ranged from Glacier Park Station to the International Boundary Line and Canada. Eight to ten lakes and streams were planted. The fish car arrived at Glacier Park at five o'clock A.M. and by ten o'clock A.M. the car was entirely unloaded. Some of the assignments were taken by truck over one hundred miles and from there packed at least twenty miles to their destination. Some passed through Canada to reach our remote northern waters, traveling by truck, boat and pack string a distance of about one hundred and forty miles. In all, our losses incurred, were far less than one per cent, or practically nil. In handling the fry for northern waters, we have received splendid cooperation from the Canadian Park, adjoining us--Waterton Lakes Park.

We find that ice is essential in handling fry and fingerlings. Extra pack loads of ice are carried when packs are made into distant places. Screened in troughs are often used when fry have to be kept over night in transit. These are placed in flowing streams. In some of our plants, where it has taken two or three days, we have found these troughs to be of great value.

It is not unusual for anglers to catch trout weighing from five to eight pounds. This is especially true of Cut-throat, Rainbow and Brook. This indicates that there is an abundance of natural food in our waters but we have not been satisfied with this. We have introduced aquatic vegetation and fish food to many of the smaller lakes high up in the mountains where it appeared to us that there might be a scarcity of food as the numbers of fish increased.

Each year we see a heavier toll levied on our fish. The increasing number of tourists to our Park means that we must expand in this field of activity. This year we planted over two million fry and eggs but this is entirely insufficient to supply all our needs. When the development of the Glacier Park road system is complete, it will mean double the present number of tourists. To keep pace with these anglers' activities, we must prepare now and carry on the good work, with greater expansion along all lines of fish cultural activities.

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